

## Fitting a HiSpec caliper conversion

1. Jack up vehicle.
2. Place axle stands under the vehicle. NEVER work under a car supported only by a jack.
3. Remove wheels
4. Clamp brake fluid hoses. From accessory shops you can get hose crimping pliers which we recommend you use, using molegrips will damage the hose.
5. If retaining the original hoses remove hose from caliper and put a cap over the end to keep it clean.
6. If using new hoses as step 5 clamp the original hose and remove from the caliper. Using a wire brush clean the other end and squirt with WD40 ready for later.
7. Unbolt the standard calipers and discard, also remove standard discs.
8. Remove dust shield. This will probably need cutting off, use either tin snips or a hacksaw, either way take maximum caution working around any part of the ABS system (sensors, wiring, rings etc). Any damage to the ABS will have to be replaced and this will be costly.
9. Clean all rust and dirt off of the hub and flange.
10. Put the new disc on the hub, using some washers and a couple of the original wheel nuts/studs. Bolt new disc in place, spin it to check it spins freely and is concentric. If you have a two piece disc and bell they will need bolting together. They must be absolutely clean to ensure concentricity and prevent any vibration problems later on. M6 nut and bolts must be tighten to torque setting 11Nm
11. Bolt bracket to hub, using the original caliper mounting points, so that the bracket is now where the original caliper was.
12. Put caliper in place, then bolt to bracket using **M10 Cap Head Bolts** provided.
13. The caliper should be square to the disc and central, if not shimming is necessary.
14. Check the disc still spins, perhaps the caliper needs shimming outwards radially.
15. Before you go any further, put the wheel in place and slowly spin, ensuring there are no problems and there is adequate wheel clearance. A common problem is the wheel balance weights, these should be removed but you will have to go to a garage to have the wheels rebalanced specifying that the weights need to be somewhere non obstructive to the braking system.
16. Now, assuming you're happy with every thing, the caliper is central, everything has plenty of clearance etc tighten all the bolts to the following torque levels:
  - M10 → 60 Nm
  - M12 → 100 Nm
17. Fit pads, we recommend using noise suppressant, like copper grease, on the back of all types of pad.
18. Using original hoses, this can only be done if the original hose has an M10 banjo and bolt on the caliper end. Providing it does simply screw into the caliper (cleanliness is of high importance)
19. Using new hoses, make sure caliper end has M10 banjo and bolt and the other end is compliant with the standard end of the original hose. Bolt the caliper end to the caliper, next remove the original hose but before you do so be prepared fluid will start to leak so we advice you work quickly, have the correct tools ready, wear gloves and put drip tray on the floor to catch discarded fluid. As soon as the original hose is removed replace with new one.
20. To fasten the hose securely to the leg is very important, we recommend using as many tie wraps as possible. Put the wheel on again, spin and turn from lock to lock. There must be no rubs and it should not be possible for the hose to touch the wheel under any circumstances.
21. Bleed out the brakes, top up master cylinder and keep a VERY keen eye on it throughout this procedure. Remove dust caps from bleed nipples, loosed bleed nipples (no more than half a turn) and wait and watch until fluid runs out, this will take several minutes. Repeat this procedure on both bleed nipples (ie front and back) at the top of the caliper, you should not touch the bottom ones, do this with both calipers
22. For a more comprehensive guide to bleeding brakes click [here](#).
23. Replace wheels, tighten to recommended torque and spin wheel again, checking for any problems.